

Hot Under the Collar: Lessons from the 2003 Heatwave in France and the Security Implications for Coping with Environmental Threats in the EU

Paul J. Stephenson

University of Maastricht

Abstract

In the sweltering temperatures of August 2003 there were over 15,000 fatalities in France, the majority among the elderly. The heatwave (*canicule*) was the greatest natural catastrophe in Europe for 50 years. Political mismanagement contributed to the death toll and government initially sought to blame medical services. However, other politico-cultural, societal and psychological factors may have contributed to the failure to protect those citizens most vulnerable. This article identifies 20 obstacles ("pathogens") to ensuring effective response in the face of environmental or weather-related threats, distinguishing between state-institutional and individual-community barriers, most of which have a cultural dimension. These factors require greater consideration by policy-makers to improve preparedness for environmental threats in the EU. The case raises questions about crisis management and how best to reduce risk for elderly populations, illustrating the limits of the state in offering social protection through institutionalised solidarity mechanisms, and recognises calls to strengthen community capacity.

Keywords

Climate change; crisis management; France; heat wave; liberty; old age; political culture; political leadership; Raffarin; solidarity; welfare state.

IN RECENT YEARS, AS EUROPE HAS EXPERIENCED HOTTER SUMMERS, THE LIMITS OF THE traditional welfare state have become apparent. Political actors have sought to identify alternative solutions to guarantee the security of the population – not always successfully. EU member states, though well-equipped to cope on paper, found themselves under considerable pressure during the heatwave of August 2003. More than 80,000 additional deaths were recorded in 2003 in the 12 countries concerned by excess mortality, compared to the 1998-2002 period. Some 70,000 occurred during the summer, of which 45,000 were recorded in August alone (Robine *et al.* 2007). This article examines the situation in France, where during August 2003 the usual death toll was almost double usual figures, with an extra 15,000 deaths concentrated in a two-week period, mainly

I am very grateful to the JCER editors, as well as the two anonymous reviewers, for their comments on my paper. Thanks also to Patrick Bijsmans, Arjen Boin, Helen Drake, Tod Hartman, An Jacobs, Mark Stout, Josée Laurent and Sophie Vanhoonacker for comments on previous versions of this article. An earlier version was presented in a poster session at the 49th International Studies Association (ISA) Annual Convention in San Fransisco on 26-29 March 2008.

Stephenson, P. J. (2009). 'Hot Under the Collar: Lessons from the 2003 Heatwave in France and the Security Implications for Coping with Environmental Threats in the EU', *Journal of Contemporary European Research*. 5 (2), pp. 293-311.

Available at: http://www.jcer.net/ojs/index.php/jcer/article/view/176/149/

among the very elderly. The catastrophe represented a major failure of the traditional (and in this case, very generous) welfare state. Political elites were seen to be impotent. In the event, the healthcare system, with a skeletal medical staff available, was stretched to its limits.

As Boin et al. (2003: 1) assert in their writing on crisis management and public leadership, "age-old threats (floods, earthquakes, and tsunamis) continue to expose the vulnerabilities of modern society", often leading to the failure of critical infrastructures (Cls) such as emergency and health care services. Indeed, heatwaves and acute cold spells threaten the most vulnerable groups of the population, including those in old age. As such, freak weather patterns – whether or not they are related to climate change – represent an ever present threat to the EU's internal security, yet the issue remains to be tackled at the member state level. Such threats undermine the basic structures of the welfare state and expose weaknesses in structures for social protection, including community. European societies generally expect policy-makers to avert threats or ensure preparedness to limit their impact. Yet, political elites struggle to make sense of crisis, often engaging in a process of denial or blame-sharing. The degree to which political crisis management is successful, it is argued, may heavily influence the death toll.

In the aftermath of crises, political elites engage in reform processes, most often allocating greater budgets to state institutions and promising political support to create extra capacity. And that's where it ends. Little attention is paid to the causes of the crises that reside within the system (Boin *et al.* 2003: 5) – these crises or "pathogens" go unnoticed, or policymakers fail to address them adequately. Similar problems can easily re-emerge during future crises where "seemingly innocent factors combine and transform into disruptive forces that come to represent an undeniable threat to the system" (Boin *et al.* 2003: 5). Given that the death toll in France alone was four times the human loss of 11 September 2001 (9/11), it appears rather strange (or perverse) that there has been such limited debate on the structural features that heighten internal security risks during extreme weather conditions.

Environmental threats pose particular problems for national security in terms of protecting the most vulnerable members of the population, such as the very elderly and handicapped. The welfare state is meant to provide services to remove hindrances such as poverty and disease and protect citizens from external enemies, be they human or natural threats. This has implications for the organization and structure of state welfare systems. Recent literature from social policy has referred a great deal to the 'active welfare state' (AWS) as being about promoting the full 'responsibilisation' of the individual, and by extension, of the EU citizen (Pestiaeu 2006). Yet the precise conditions for ensuring the active welfare state have not been made explicit. Recognising that traditional social protection does not encourage citizens to be active, social policy scholars (Ferrara 2005; Giddens 2007; Hantrais 2007) refer to a need to create a more effective social safety net, such as through "community capacity-building" to reinforce social capital (Craig 2007).

Much of the AWS literature refers to exclusion, and advocates strategies to secure employment rather than strategies to ensure self-protection. It addresses economically 'active' citizens rather than the 'non-active'. The notion was first found in the UK Government's Green Paper "New Ambitions for Our Country: A New Contract for Welfare (DSS 1998) in which Tony Blair advocated state welfare recipients "doing for themselves", based on the recognition that vulnerability was partially socially determined. It implies less reliance on state institutions and more empowerment of individuals as part of a strong social fabric, whereby a community can act as welfare provider, and, in so doing, help overcome reliance on formal state structures. However, assuming that the individual's responsibility is partially socially (and by extension, culturally) determined, when it comes

to engaging in a process of capacity-building for social protection, there may be barriers embedded within the society/polity which provide resistance. Such constraints are exposed during health or environmental epidemics, at times when the welfare state is put to the test and comes under close media scrutiny.

The aim of this article is to offer an empirical insight into a recent internal EU security threat – the 2003 heatwave in France. It seeks to understand why such a high death toll occurred. However, accepting that existing research analysis has recognized an apparent failure of critical infrastructures (CIs), it reflects on what this means for social policy change. Beyond the political mud-slinging – between those who blame ineffective political leadership and the failure of welfare institutions, and political elites who lament a failure of inter-generational solidarity or breakdown of the social fabric – the article identifies other "pathogens", culturally and psychologically embedded within social and political life. It argues that these need greater political consideration in order to ensure better preparedness for environmental threats in the EU.

The case shows how the potential for individuals to engage themselves as an "active welfare state" resource is limited due to societal perceptions of risk, trust and responsibility. Much recent literature has addressed the way in which the management and communication of risk has become a key concern of public policy. The notion of risk is amplified and attenuated through its link and association with social and individual factors which may themselves heighten or dampen the perception of threat (Beck 1992; Slovic 2000; Pidgeon *et al.* 2003).

Insufficient attention has been paid so far to ways of engaging communities in mutual social protection, though solidarity mechanisms. Empirical evidence supports the view that scholars need a broader conception of security, which acknowledges non-military threats to population welfare, and a more adaptive notion of the welfare state, one which recognizes the population itself as a key resource. Ensuring security may require adapting the organization of political and social life, even though promoting "responsibilisation" may constrain the liberty of the individual. Are there limits to individual freedom when it comes to protecting vulnerable citizens?

This article reconsiders much of the academic output in the last six years from various fields of study (epidemiology, gerontology, public health, risk, contingency planning) but goes further by examining cultural stereotypes, attitudes and the organization of social and political life. It is meant as an empirical case study specific to France from which to reflect and discuss the potential lessons and implications for the EU, without claiming to offer policy recommendations as such.

The second section of the article reviews academic analysis of the French heatwave of 2003 to date. The empirical third part examines the factors that prevented active welfare and which may have contributed to such a significant death toll. It identifies 20 factors, distinguishing between structural, institutional and administrative barriers and how they are linked to political culture, and more deeply embedded sociological "pathogens" related to individual and group behavior and the organization of social and cultural life. Based on the experience of 2003 and the process of reform thereafter, the fourth section considers what we can learn from the case and what it means for our understanding of security and liberty, particularly regarding those "boundaries of welfare" (Ferrera 2005) that have been largely ignored in the relatively superficial, political process of reform.

Analysis of the 2003 French heatwave to date

2003 was Europe's hottest summer on record since 1540 when the Rhine was reduced to a stream. In France, where normally 22,000 deaths are registered every month, from early August when the heatwave struck, there were an 15,000 additional deaths in a two-week period (an increase of 70 per cent on normal annual figures), after which figures returned to "normal". As much as 82 per cent of the excess deaths were of people over 75 years old (Grynszpan 2003: 1169). On 1 August the record temperature of 47.3 degrees centigrade was recorded in Portugal. The immediate cause was a strong anti-cyclone in the Azores which led to abnormal intensity and duration (Black *et al.* 2004). Throughout August two-thirds of weather stations across France reported temperatures in excess of 35 degrees centigrade, while 15 per cent registered 40 degrees. For French meteorologists a heatwave is a period when maximum temperature increases above 30 degrees. Humidity, air motion and radiant energy also influence the heat stress upon human health. The 2003 heat wave was a "silent killer" (Poumadère 2005: 1489-91) or "stealth killer" (Lagadec 2004: 160). While the excess mortality rate was just 4 percent extra in the northern city of Lille, it increased by 142 percent in Paris (Vandentorren *et al.* 2004: 1518).

France is used to hot summers particularly in the Midi, with Languedoc annually basking in the high 30s. In fact, temperatures were only 3.5 percent above normal annual figures. What made the difference, however, was the wide geographical spread of the heatwave and its duration; never before had such a heatwave lasted for so long. For example, the city of Nîmes often experiences four or five consecutive days of extreme heat, but had 30 such days. The night temperature in Paris on 11-12 August stayed above 25.5 degrees as masses of hot air from below the Pyrenees effectively created an oven. Government later recognized catastrophe in 3,000 of the 7,000 communes that eventually declared a state of emergency (Journal Officiel, 1 February 2005).

More than 70 scientific papers and reports related to the European heatwave have been published. The EU recently financed a technical study covering 16 countries (Cheung *et al.* 2007; Robine *et al.* 2007). The most comprehensive articles on the French heatwave specifically, have provided useful insight from the fields of contingency and crisis planning (Lagadec 2004; Thirion *et al.* 2005) and risk analysis (Poumadère *et al.* 2005). Patrick Lagadec, Director of Research at the Ecole Polytechnique, has written extensively on crisis prevention and management. His extremely comprehensive analysis of administrative breakdown in this case offers a highly detailed, day-by-day account of the event and the way in which "a series of traps impeded adequate responses" (2004: 165). He identifies four layers of cultural gaps that help account for the inability to confront crisis and compares the event with the 1995 Chicago heatwave, drawing on the literature that emerged.

Jim Ogg's (2003) comprehensive investigation into the implications of the 2003 heatwave on behalf of the UK's *The Young Foundation* was made in the immediate aftermath. He claimed that the heatwave would leave an "indelible mark" on French society but concluded that it would be hard difficult to identify concrete areas that social policy could develop as a direct result of the lessons learned. What it would supposedly do was at least open up a "genuine" public debate on socio-demographic changes occurring in French society (Ogg 2003: 6). With more distance from the heatwave, this article discusses policy implications for both internal security and social policy, but doubts whether lessons were learned and if any significant public debate has really taken place.

Other scholars have addressed the general phenomenon of heatwave from specific disciplines such as gerontology (Langer 2004), public health (Vandentorren et al. 2006), emergency medicine (Vanhems et al. 2003; Davido et al. 2006), intensive care (Franklin 2004), weather (Black 2005), climate (Vescovi et al. 2005), the built environment (Wright et al. 2005) and national security (Busby 2005). Social relations and the links between

integration and mortality in France have been analysed across a wide range of societal groups (Berkman *et al.* 2004; Fuhrer *et al.* 2004).

Scholars addressing politics and policy relating specifically to the elderly in the period prior to the heatwave have focused largely on failed attempts at pension reform from 1997 to 2003 (Schludi 2003; Palier 2004; Natali & Rhodes 2004). Yet, literature addressing questions of citizenship and social exclusion in respect of older people "remains fairly thin at present" (Craig 2004: 98) and is grouped with disability, sexuality and ethnicity as one of many areas of study for social exclusion. However, the needs of the elderly with regards to social support and services have been examined through various empirical cases in epidemiology (Colvez *et al.* 1984; Cohen *et al.* 2005; Imbert *et al.* 2005), though none address the social protection of vulnerable populations in times of crisis, and the implications for EU policy.

Obstacles to welfare protection and crisis preparedness: emerging barriers, embedded 'pathogens'

In August 2003, death certificates mentioned dehydration, hyperthermia and heat stroke: the direct killer was heat (Vandentorren et al. 2006). However, the behaviour and attitudes of French state institutions and society at large requires further examination. Exposing inherent normative, organizational and psychological barriers to welfare protection in France can provides lessons for EU internal security. The following section identifies 20 obstacles to effective response. First, it identifies embedded features of French political culture that hampered effective political and administrative management, and which can help explain the failure of critical infrastructures (Cls). Secondly, it examines more embedded features of French society and culture, including common attitudes towards the state, experts, heat, risk and the elderly.

a) Institutional and political barriers

1. Political stonewalling: It was a group of emergency physicians (Association des Médecins Urgentistes), the French weather station, (Méteo France), emergency services (sapeurs pompiers de Paris) and undertakers (pompes funèbres générales) who gave the first signs of crisis, produced data, and made declarations. Prime minister, Jean-Pierre Raffarin maintained a "state of attenuation" with instructions to limit the dissemination of statistics of the death toll. Only after temperatures had lowered was an emergency response launched (Fleck 2003: 773). Raffarin only demanded the extension of the emergency plan (Plan Blanc) to the whole country at an inter-ministerial government meeting a week into the heatwave on 14 August. The initial response was "Deny, Deflect, Defend", closely mirroring what Klinenberg (2002: 168) recognised in Chicago in 1995. As Lagadec (2004: 160-161) describes: first, hospital outcries of being overwhelmed are dismissed by political elites as recriminations against budgetary cuts; second, the media is blamed as sensationalist; third, government denounces "politically-motivated polemics"; fourth, the health minister reassures the country all is under control but as the death toll rises "basic stonewalling" is no longer sufficient. Political elites do not necessarily have the intellectual and practical frameworks to respond appropriately; under-declaration is the rule and leads to total negation (Hémon & Jougla 2003).



Figure 1: "It's done, I've given the order to immediately launch the White Plan"; "Too late, we're already using the Black Plan" (source: http://www.leplacide.com,15 August 2003). Artist permission provided.

2. <u>Government communication</u>: Raffarin was eventually forced to face the media, while President Chirac remained mute until the end of August. Reporters headed south to hunt out politicians on vacation at their villas. Returning from his holidays in the Alps, Raffarin visited a retirement home and handed water to the elderly, a cynical political stunt for the camera crews. In short, the government's own news management strategy was inept, not in anyway way tailored to the "demands of a 24-hour rolling news media culture [...] it got it signals woefully wrong" (Kuhn 2005: 256). Media coverage was persistent and "therapeutic", meaning any public action was based on a response to recorded deaths (epidemiological data as *proof* of the phenomenon), rather than targeted broadcasts promoting preventative action.



Figure 2: After the hot air caused by the heatwave Raffarin pays a visit to the elderly: "Try not to give off too much warmth" (source: *Le Courrier International*, 19 August 2003, cartoon by Mix and Remix). Artist permission provided.

- 3. <u>Media reporting</u>: TV debate revolved around the great burden on hospitals and the failure of geriatric wards to cope, then the delay in registering deaths. This can perhaps be explained by the absence of any defining "triggering event" (Shrivastava 1992, in Stein 2004: 1243) and a time lag of up to three days between the start of the heat wave and the surge of deaths. The media had no momentous explosion or tsunami-style image to exploit. Sense-making could only be a slow and iterative process, with the full extent of the event as "catastrophe" only emerging through the successive build-up of images, during a "critical period" of several days. Only when temperatures lowered in the third week of August did the full picture begin to emerge.
- 4. <u>Bureaucratic complexity</u>: Whereas information on emerging infectious diseases tends to spread quickly, heatwaves induce bewilderment (Grynszpan 2003: 1170). The government's inability to act was linked to systemic incapacity: directors were away holiday, dossiers built up progressively and it took days for data to be collected and statistics collated (Lagadec 2004: 162). Signals got lost in corridors, communiqué writing took days and the primary impulse of officials was not to seek extra information, organise meetings and set up networks in order to take decisions and act, although such administrative culture is not a French monopoly (Poumadère 2005: 1490). Some scholars argue that French politics is imbued with "elitist attitude of secrecy and a reluctance to share quantified information", which prevents knowledge integration (Porter 1995).
- 5. Administrative culture: There was no spirit of emergency to scientific monitoring because of the specific cultural dimension in France to the way in which scientific studies have to be carefully launched. Lagadec (2004: 160-165) describes in depth how the "system" was unprepared for the challenge. He recognises a series of characteristic "visions" and operational frameworks of reference", explaining how French managerial culture is hierarchical and compartmentalised, comprises "a yes-or-no response culture" and operates with a "step-by-step, top-down, centralised approach" in a "stable and surprisefree world", where disclosing information to the public is regarded as a "particularly high risk move". He identifies complex ministerial structures with a "laborious mobilisation" of personnel, comprising "divisions, partitions and demarcations (wait-and-see defensive attitude)" and "vertical isolations (each layer protects itself)", which commit "dramatic errors in communications" and engage in "scapegoat searching". The problem is not unique to political administrations. As Thirion et al. (2005: 154) assert regarding hospitals, even supposedly "perfectly adapted services could not improve the prognosis of subjects who were already condemned [...] our exclusive and curative medical culture prohibited effective preventive action"; "the 'system' remained deaf to all this 'noise" The head of the Union of Emergency Physicians, Patrick Pelloux, was dismissed as an "activist" and accused of failing to "wake up the system" - a system described by one analyst as "an arcane constellation of improbable organisations that could hardly be identified, charted, reached, and mobilised in a coherent and concerted way" (Lagadec 2004: 163).
- 6. <u>Risk prevention</u>: France had no emergency plan in place, as if climate change was "restricted to a distant or uncertain future" or to pre-industrial countries (Poumadère 2005: 1483). There had been no recent political action on heatwave impacts, despite two major related international reviews, one of which, in French (Besancenot 2002) had identified over 1,000 publications on heatwave impacts (most in English, eight in French), insisting on the "absolute urgency" of tackling risk prevention in the face of global warming (Poumadère 2005: 1489). In September 2003 the then health minister, Jean-Francois Mattéi, accepted the country had learnt little from the event, and that, despite the previous 1983 heatwave, it had "never calculated, evaluated or quantified [the deaths] on a national level" (Crabbe 2003: 10). One lesson, however, was the subsequent re-analysis of data by national health and medical research institute (INSERM), which uncovered more than 6,000 deaths during the fortnight of drought in 1976. These excess deaths had never

been politically acknowledged and had, in fact, been "hitherto denied" (Hémon & Jougla 2003). Despite data being available for 27 years, attention at the time had focused on farmers' agricultural losses, with a "drought tax" voted through by parliament, which distracted from the death toll. France is probably not alone. As Robine *et al.* (2007) assert, research on climate threats and security management across Europe has long been scant, generally resting upon poor data until 2003.

7. Pension reform: The French government had long sought to radically overhaul pensions, which in 2001 accounted for 44 per cent of social security spending (www.diplomatie.gouv.fr, 20 March 2007) but the political feasibility of policy adjustment and reform critically depended on the government's ability to orchestrate a consensus with the opposition or trade unions – it could not (Schludi 2003: 199). "Blame sharing" governments have a strong incentive to forge stable political consensus on pension reform, involve other parties and trade unions (Palier 2003: 214). For Juppé (1995-1997), any plan to cut public pension was withdrawn due to mass social unrest and strikes. Neither the system of industrial relations nor the French party system was conducive to reform: "French trade unions could mobilize protest but had limited capacity for strategic action"; Jospin (1997-2002) dedicated the beginning of his mandate to reform but "procrastinated" (Palier 2003:214). He did, however, create a reserve fund in early 1999 of 2 billion francs (304 million euros), which had grown to 3.4 billion euros by 2001. Yet fundraising alone was insufficient; structural changes had not been made.



Figure 3: "And what if we told them it was part of our plan to tackle the pension problem", 12 August 2003 (source: http://www.leplacide.com). Artist permission provided.

8. Healthcare funding: France has "one of the most effective social security systems in the world", covering healthcare unemployment, family policy and retirement pensions. The United Nations Development Programme (UNDP) places France at the top of all rankings (Pestieau 2006: 147). The system is "based on the principle of national solidarity and it covers all residents against the financial consequences of life's misfortunes", so the state would believe (www.diplomatie.gouv.fr, 20 March 2007). The country appeared well placed to cope with any national disasters or medical emergencies, yet the national health insurance system (*l'assurance maladie*) was floundering with a deficit of 11 billion euro in 2003 and 12 billion in 2004. As a result, many old people's homes and care institutions



lacked basic air conditioning. The high death toll triggered angry debate over the inadequacies of the healthcare system (Ysmal 2004: 1008).

- 9. <u>Le weekend</u>: When *Méteo France*'s first warning was published on 7 August 2003, emergency services were already feeling the strain given the huge forest fires in the south of the country. Yet the National Health Surveillance Survey put off the launch of a scientific survey until Monday 11 August because "no survey could possible be launched on a Friday afternoon" (Lagadec 2004: 161). Though the president of the Trade Union of Hospital Emergency Services spoke out strongly to the media on 9-10 August, the government ignored his warnings. The death toll had grown dramatically by 14 August, when, just as the intense heat was ending, the prime minister mobilised all hospitals and a telephone hotline was set up.
- 10. <u>Labour law</u>: The 35-hour week may have contributed to severe staff shortages in the public health and age care systems during the country's summer vacation. Indeed, a Ministry of Health report accused a lack of anticipation, organization and coordination, recognising "poor communication between the various healthcare departments that prevented an early recognition of the problem, which was then 'strongly aggravated' by the seasonal reduction of medical staff" (Fleck 2003: 773). The problem many not be seasonal but weekly. Were a big freeze to occur in mid-winter, such as over the Christmas vacation, there may be similar failings in the system given the restrictions placed on individuals to work beyond 35 hours (since relaxed by Sarkozy), and the slow, rigid and complex, paper-heavy system of hiring temporary staff, whose contracts could only be extended once in the short-term, and then meaning interim agencies had to complete lengthy *dossiers*.

b) Sociological and cultural 'pathogens'

- 11. Heat as risk: Ministers in t-shirts failed to take heat seriously as a political issue. Even Bernard Kouchner, founder of *Médecins sans Frontières*, was reported as saying: "What society do we live in when people call for government help when it is hot or cold?" Natural hazards are not perceived to be as threatening as technological hazards (Slovic *et al.* 2000). Heatwaves are increasingly seen as a "normal" or expected part of summer. The positive connotation of summer heat may lead to individuals underestimating the danger (Thirion *et al.* 2005: 154). The general mindset is: "hot and sunny weather in the summer, where is the problem?" (Klinenberg 2002: 17). They receive little public attention because they don't lead to expensive property damage as hurricanes do. In the US floods, tornadoes and lightening get most TV coverage even though heatwaves are deadlier (Franklin 2003). Prior to 2003, doctors may have been implicit in the attenuation process, often failing to declare heat stroke as the principal cause of death, thus "significantly changing the normative structure of the medical causes of deaths" (Hémon & Jougla 2003).
- 12. The cultural myth of summer: Social attenuation may also be fed on the cultural myth of summer. A year after Marseille's 1985 heatwave, came the release of two of French cinema's most immediate references to heat: firstly, Jean-Jacques Beineix's 1986 film 37.2°C le Matin, which sees the tragedy of Beatrice Dalle's Betty with borderline disorder in scorching temperatures. Cedric Klapitsch's 1995 sentimental comedy, Chacun Cherche son Chat (lit. Everyone's looking for their cat; released in the US as "When the Cat's Away"), portrays quaint, harmless old ladies bored in the Bastille during the heat of summer, trying to help a young girl find her cat as if to suggest summer in Paris is a harmless time for solidarity among those left behind to engage in neighbourly acts, looking out for each other with a unique camaraderie ("a spirit of friendly good-fellowship) among those left behind.

13. The August shutdown: Key government figures were on holiday, alongside doctors and nurses and the concierges of apartment buildings. Ministries were on "stand-down" mode (Kuhn 2005: 256). France "shuts down" in August; it is a time of relaxation and distant escape for Parisians and city-dwellers. Depopulation is clearly visible on the streets, public transport and within the workplace (Ogg 2003: 6). At this time many elderly relatives stayed at home or had been left behind. The summer break is a national institution that presents a major spatial and temporal boundary for welfare protection. Large distances from Paris to the beaches of the south (for example, 750kms or a full days drive to Montpellier), present an obstacle or disincentive for action. The opportunity cost of returning home is high. Time and money compete with a sense of moral duty. The welfare of a child (enjoyment), spouse (well-earned break) or couple (quality time alone or *en famille*) may ultimately be deemed more precious than the reassurance of an elderly relative's well-being, who is, in the absence of any alarm, assumed to be safe. One might even complacently assume that prolonged leisure is an expression of liberty, guaranteed by the state and exempting the citizen from personal obligation.



Figure 4: Heatwave: France is shocked by its indifference. "I asked you to water Mummy over the holidays!" (source: *Le Courrier International*, 26 August 2003, cartoon by Herrmann, originally in *Tribune de Genève*). Artist permission provided.

14. Responsibility for protection: Cross-cultural research with the US suggests relatively high levels of fatalism in French public attitudes towards health risks and a belief that they should be handled by experts not lay individuals (Slovic *et al.* 2000): "when there is a really serious health problem, the public health officials will take care of it. Until they alert me about a specific problem, I don't really have to worry" (Poumadère 2005: 1490). This indicates a belief in "the State" as nanny and provider of social protection – not that this is unique to France. But the State upholds this stance: according to the French Ministry of Foreign Affairs, the citizens of the French Republic are "ambivalent figures", "elements in the single and indivisible people" and "administered subjects", "only able to act through their representatives". Its website explicitly acknowledges that expansion of the State into social and economic affairs changed the concept of public service, expanding it from that

of an administrative entity to one that plays a role in social security (www.diplomatie.gouv.fr, 20 March 2007).

15. Political trust: Poumadère et al. (2005: 1492) concluded the heatwave would have long-term consequences in terms of distrust towards politicians. Ambler (1975: 31) noted, almost 35 years ago, that conflict and instability in the French political system are "attributable, at least in part, to the pervasive mistrust which presumably characterizes social as well as political relationships", asserting that political mistrust is "one facet of generalized mistrust in French culture". On the other hand, it is held that French citizens do place enormous trust in public health experts. If political trust is positively related to "well-being, social capital, democratic attitudes, political interest, and external efficacy" (Catterberg & Moreno 2005: 31) – implying that trust responds to government performance insofar as it impacts upon the individual – then, in the absence of a national health epidemic, the healthy, economically and politically "active" individual has no reason to mistrust the public health expert. One may trust by default, based on a faith in the expert's ability to protect in any hypothetical future incident.

16. <u>Urban living</u>. A first analysis of the death toll estimated that 80 per cent of those who died were aged 75 or older. This was particularly true in urban areas, such as Paris, where the heat wave struck the elderly in their own homes. The *Institut Médico-Legal* (IML) carried out post-mortems on 452 of 919 home deaths reported in Paris. Of those examined, 92 per cent lived alone and 41 per cent lived in a one-room apartment, 12 per cent with less than 10 square metres. Economic poverty was reflected in the living conditions of tiny urban spaces. Vandentorren *et al.* (2003) identify inadequate building isolation and poor urban planning as key factors determining high death rates. A higher number of rooms decreased risk, while more windows increased risk. Vegetation around houses acts as a protector. Air pollution was also a major factor with some 379 deaths attributable to high concentrations of ozone from 13-17 August (*Institut de Veille Sanitaire* 2003).

Just over half the victims lived on the two highest floors of Parisian buildings and, among them, more than one in three lived "under the roof in a room lit and ventilated by a skylight"- in other words, in traditional Parisian "service rooms2 – commonly occupied by the elderly and by some of the heatwave victims younger than 60 years. In many reports, the primary response personnel (police, firemen) registered the suffocating temperature where the bodies were found, between 36°C and 40°C (Poumadère 2005: 1487).

17. Social exclusion. Analysts claimed the disaster "revealed cracks in the social foundation" of urban communities" and that a breakdown in community services and neighborhood networks had ultimately "hastened the demise of vulnerable and 'hidden' elderly" who would otherwise have survived (Langer 2004: 275). However, Ogg (2005: 23) points at the absence of any reliable data to prove abandonment, stating that such a "perceived social ill" was at least evoked by politicians, health officials and the media. Nevertheless, 15 of 86 bodies went unclaimed, despite the assistance of professional genealogists. It outlined how vulnerable older ethnic minority men are to social exclusion (Ogg 2005: 15), as well as elderly women of low socio-economic status (Poumadère 2005: 1489). Social service files for 383 victims found that 337 lived alone, yet only one in four had no family or social link. The risk of death was six times higher for those with no social, cultural, religious or leisure activities. A greater degree of "independent" living lowered risk (Davido et al. 2006), yet the use of home helps, doctors, house cleaners or meal delivery actually heightened risk since individuals had a greater dependency on external social support (Vandentorren et al. 2006). Clearly, social relationships are significant predictors of mortality, social ties being important for well-being; connectedness and support are linked to physical/mental health as Berkman et al. (1989) found in a study of almost 20,000 employees of EDF-GDF.

- 18. Associational involvement. Was there a failure or absence of social collectivism, perhaps as expressed through voluntary associations looking out for the elderly? Low associational involvement implies low guarantees of extended personal commitment to the community. Scholars have generalized in their identification of weak social commitment (civic participation) in France and thereby concluded an absence of any strong enthusiastic form of social integration. Nevertheless, Vassallo (2004: 298) claims that strong associational involvement is unnecessary and does not prevent social or societal activism; there are always individual motives behind displays of (collective) political activism but nothing holistic. Historically, French individualism was criticized by de Toqueville. France was the country that, almost 40 years ago, defied social capital theory, where political and social individuality was supposedly based on egotism (Bourdieu 1972). It would be short-sighted, however, to assume France remains such an exception to other EU members.
- 19. The social stigma and denial of old age. French society was confronted in a "brutal way" with the social implications of ageing population and quality of life among the elderly (Ogg 2005: 4). On 3 September 2003 President Chirac and Delanoë, mayor of Paris, attended the funeral of 57 unclaimed corpses, the messages evoked being that society does not care. The media fed the notion of helplessness and abandon by its focus on a single victim, Marie France, herself an abandoned orphan, named by the French authorities, who remained unmarried and died at age 88 in a small flat near the railway station in Lyon (Ogg 2005: 15). In response, in Le Monde Diplomatique Martin Winckler asked "What does mean to die old in France today?" He asserted that no care institution could replace family and the social environment when it comes to elderly welfare: "society was sick and in denial of ageing and death, born of an anxiety that no tranquilisers, paid holidays, summer exodus could possibly appease". Moreover, the demise of the elderly is often taken for granted – death comes with old age. At home relatives are not surprised by the death of a sick or weak parent; death is isolated and "logical". Likewise, as Thirion et al. (2005: 154) assert, we accept old people's homes as places to go to die. In the West, youth and well-being are idealized and old age ignored, given the "stigma effect" of its social characteristics, namely that it targets the "widowed, isolated, sick and poor" (Poumadère 2005: 1489). The elderly are often social outcasts...from whom we customarily turn away" (Klinenberg 2002: 17). Moreover, the concept of elderliness is "fuzzy" (Thirion et al. 2005: 154). The fear of dying alone remains a major taboo in leisure societies with ageing populations (Ogg 2005: 16).
- 20. The cultural stereotyping of the elderly. TV's portrayal of the elderly may have influenced perceptions of old-age in the long-term. The media "fuelled the worst fears of old age as an inevitable state of loss and dependency" (Ogg 2005: 5). Destitution was evoked as a defining characteristic of old age and projected onto all victims. Such stereotyping is arguably rife in French cinema: Etienne Chatiliez's blackly comic Tatie Danielle (Auntie Danielle) from 1990 sees an 82-year old aunt abandoned in a Parisian apartment where a fire eventually breaks out, and is left to the mercy of a hired home help while the family head south. She is portrayed as cantankerous, odious, stingy, lying, capricious and unbearable, a burden, an anti-hero, an emotional blackmailer who overdramatises her situation. Might this film provide some kind of comic, social judgement on the old, legitimising the practise of escaping the elderly over summer? Tatie Danielle was in some senses an update of René Allio's 1965 film La Vieille Dame Indigne (The Shameless Old Lady), about a lonely widow in Marseille, Madame Bertini whose sons try to kill her off. In highly esteemed literature such as Balzac's 1835 Le Père Goriot (Old Goriot), a retired baker and business man lives to support his two daughters but is essentially victimized by them in their pursuit of personal gain. In Zola's shocking novel, Therèse Racquin (1867), the naïve elderly mother-in-law is left abused, despised, rigid and mute.



Crisis preparedness and social welfare: minimising risk, maximising responsiveness

The heatwave raises questions about individual and collective solidarity, given low levels of collective, associational involvement and responsibility towards both the self and others, in times of insecurity. French citizens are highly reliant on the state to ensure welfare, assuming that institutions can guarantee individual security. Notions of risk, trust and responsibility arguably require re-examination, so that social policy considerations regarding protection and welfare can be properly incorporated into climate change policy.

Research into the elderly in the US and Japan indicates a degree of "intergenerational ambivalence" regarding what is best for the elderly in terms of care - choices are often institutionally manipulated (Izuhara 2004: 663). When should concerns for an individual's security favour dependency over autonomy? Should ensuring the welfare of "non-active" citizens encroach upon the liberty of the (politically and economically) "active"? French public health research based on 71,000 subjects in Alsace aged 75 years and more reveals the important commitment of family members and their close relationships towards the elderly. The demand for home help and social activities remains high among even the least dependent; a case study in Normandy shows demand was 3.5 times higher than supply (Imbert 2005). Welfare provision inevitably means placing security and liberty in a head-on collision – while 20 per cent of services go to those who state they do not want it, two-thirds deemed to need the service refuse it (Colvez et al. 1984).

Solidarity may be best expressed through seemingly minor, everyday acts of support, which can help bridge inter-generational divides and reshape perceptions of what it is to be old. Solidarity extends beyond mass protest against government. It is not an asset confined to the workforce to be expressed on a formal, procedural, mass-organized basis inside trade unions or professional collectives, but can equally be diffused organically across the generational divide through informal and *ad hoc* gestures by the individual in civic life. There is a need to educate citizens about simple and natural methods of caring for the most vulnerable (Thirion *et al.* 2005). Equality and liberty for many elderly citizens depends not on a guarantee of institutional solidarity but on the expression of fraternity, which is by its very nature more personal. Citizenship is a differentiated notion across the ages, with the degree of dependence on others on a continuum between the "active" and "non-active". In 2020 as much as 10 per cent of the EU population will be over 75 years old.

Promoting inter-generational solidarity as a welfare resource beyond the state

Pestieau (2006: 146) claims that "responsibilising" welfare is an "apparent change in attitude and perspective that is unthinkable in France" because parties from both Left and Right have been equally conservative about social institutions and unable to modernize French society. Yet the case shows that complex institutional machinery cannot guarantee welfare, hence the urgency of breaking dependency on public transfers (Pestieau 2006: 147). Yet in this case, institutional solidarity was further expressed through traditional means, by providing extra financing for care institutions. Reforms were short-sighted and timid, an opportunity to appease those that had been campaigning for extra resources before the incident. Healthcare institutions used the disaster as a window of opportunity to secure greater financing after years of budgetary cuts.

State institutions may be fundamental, however, in providing structural and policy solutions for the problem of solidarity (Esping-Andersen 1990, in Rodger 2003: 404). The welfare state has a moral obligation to guarantee social solidarity; government is the manager of a set of institutions whose effective function it must ensure (Arts & Gelissen 2001: 283, in Rodger 2003: 404). Political institutions thus have a key role to play in cultivating social capital through social networks, cooperative norms and interpersonal

trust, since it makes us "smarter, happier, safer, richer, and better able to govern a just and stable democracy" (Putnam 2000: 290). This would empower citizens to "manage" their own welfare and be more resilient and resourceful in times of crisis. Effective contingency planning by government appears to be vital. Promoting the "subsidiarity of social action", based on the participation of citizens at the local level, might prove a complementary value for a Fifth Republic, compatible with EU norms.

Refining social, economic and urban planning – in time and space

The effective "national closure" of many EU member states each summer, a socio-cultural and institutional phenomenon more prevalent on the continent than in the UK, may no longer be sustainable. Long hot summers are set to persist. One wonders whether the subsequent political move to place all vulnerable French persons on a town hall register would have any effect during a summer heatwave since those civil servants in charge of compiling and monitoring the register would most likely all be on holiday (Ogg 2005: 30). Just as employers encourage working from home (travail à distance) or flexible starting times, so the same "staggered" approach might be promoted for taking holidays. Dismantling the "herd mentality" towards summer holidays would save lives by cutting traffic incidents on the crowded motorway to the south (autoroute du soleil), while also reducing environmental impacts. It would ensure greater capacity in hospitals and administrations, enabling more rapid and effective response. EU member states boast generous welfare systems: France offers the most paid holidays, "compensation" days (RTTs) and national holidays in the EU. Leisure is an increasingly political commodity, paid holiday being part of social welfare provision, construed as a basic, non-negotiable employee right. Does liberty mean freedom to serve the interest of the individual at all costs? To what extent would constraints placed on when holiday is taken impede upon liberty?

In a future heatwave disruptions to electricity distribution could reduce hydroelectric production and impair the correct functioning of nuclear power plants that generate electricity. Moreover, hydroelectric stations may be unable to meet the shortfall, something which was only considered to be a mild threat in 2003 (Thirion *et al.* 2005). There are also long-term implications for architecture and urban planning: that the elderly were stuck in infernal, top-floor accommodation of tight proportions, be it *chambres de bonne* (formerly bedrooms used by the domestic staff of middle-class households) or pitch-roofed garrets, meant they were hidden from potential sources of welfare assistance. The case is highly relevant to the work of Ferrera (2005) who focuses on the 'spatial' challenges of national welfare, particularly the link between territory and how structural factors can determine vulnerability. Ensuring an urban fabric that decreases risk for the elderly would lower security threats and, in turn, enhance personal liberty and access to the external environment, thereby overcoming a significant boundary to both social welfare and crisis preparedness.

Concluding remarks: on liberty and security

The 2003 heatwave saw the failure of the institutional mechanisms that make up the traditional welfare state. The poor handling of the affair can be largely accounted for by systemic deficiencies and failed Cls. Contingency management was reactive, relying on statistics, data gathering and proposing therapeutic responses. Political and administrative culture was hierarchical and secretive, decision-making speeds low and time-lags high. The crisis was marked by serious media mismanagement, a failure to perceive the extent of the risk, a reluctance to listen to the medical community and general blame-deflecting tactics. Yet other socio-political and cultural factors enter into the equation: the August

month-long holiday, societal perceptions of risk, trust in politicians and health experts, images of the elderly and levels of individualism. Existing societal attitudes towards the elderly may have also have hampered the protection of the most vulnerable. The media's portrayal of a destitute, socially-excluded and highly-dependent age group may have reinforced these stereotyped images further.

Security

Human security is no longer principally about military, but also environmental threats. Moves to broaden the security agenda in the US have "coalesced" into the concept of "human security", an umbrella term that addresses largely non-military threats to human welfare (Busby 2003: 1). As the case shows, security (sécurité) is not just about guarding against terrorist threat. The notion must embrace social protection or even physical safety (sûreté). Defence against unnecessary, unexpected or premature death will increasingly have to be tackled via policy tailored to cope with environmental threats, be it heatwave or acute cold spells, the cause of which, for many climate change advocates, is a human one. Weather is a valid national, and by consequence, EU security issue.

Ineffective preparedness and response to oil spills, for example, has shown a lack of organizational flexibility and an absence of EU coordinated crisis management, but the Founding Fathers did not conceive a crisis management institute to tackle freak meteorological conditions – can one really blame them? (Thirion *et al.* 2005: 143). Despite the proliferation of new monitoring agencies that regulate safety and security the EU has no in-built organizational capacities to mitigate and respond to internal environmental crisis affecting the population.

Based on the "pathogens" exposed in this article, there is a clear case for scholars of crisis management and risk analysis to work more closely with social policy scholars to search out ways to increase community capacity and improve societal behaviour and response mechanisms beyond the traditional institutions of the welfare state, in the face of weather-related threats. The case suggests that crisis management preparedness, climate change policy and welfare reforms aimed at social protection should be developed hand in hand, with a view to increasing community-based capacity – recognizing the individual and community as basic critical infrastructures! As Craig (2007) underlines, this means not only promoting solidarity through action, but understanding the incentives that motivate its expression.

Liberty

Conceiving of liberty for the elderly population may require nuanced discussions about autonomy versus dependency: should social protection be institutionalized or community-based? Any discussion requires reconciling liberty with equity and wealth distribution (pension reform). Autonomy means the ability to live independent lives outside of state institutions wherever possible. Ultimately, however, *dependence* is political currency: it creates jobs in the care sector, props up state-run care institutions and provides an argument to generate tax-based revenues. A cynic might even point out that the loss of 15,000 pension recipients was an economic blessing for the state.

Enhancing liberty and security by promoting organic solidarity and a community-based strengthening of the social fabric would have little short-term, visible, quantifiable impact for political elites, thus remains elusive, far beyond the realms and ambitions of short-term party politics. Nevertheless, the potential for individual responsibility within the AWS – despite all the rhetoric – may be largely hindered by political unwillingness to invest in

strengthening the social fabric when more institutional means of welfare offer guaranteed visible (or at least accountable) outcomes that can be translated into, or help secure, political support.

Sovereignty may need to be reconsidered from a social policy perspective, as being related more to the welfare and protection of the individual than a high politics preoccupation with national borders or the freedom to determine interest rates – Ferrera (2005: 111) refers to "social sovereignty" as a contested concept across the EU. Alternatively, I suggest the term "individual sovereignty", to imply a right to welfare and social protection but also a duty to assume a certain responsibility in that provision, both by the individual for his/herself as well as for community members. A greater "responsibilisation" of individual welfare within the AWS may only come about by assuming risk and explicitly acknowledging the limits of politically-driven, institution-based welfare systems and hence, a rational acceptance of the limits of the state.

Freak weather is an external threat to internal security. Action to reduce vulnerability in the long-term might concentrate on adapting politico-institutional structures to improve responsiveness, by refining the temporal/spatial organisation of society and, in so doing, minimise welfare risk. Systemic features of political, social and economic life are culturally-based, resting on deeply embedded normative assumptions and beliefs, which can be traced in the history, and hence path-dependence, of welfare institutions. Fundamental "pathogens" that heighten risk and constrain preparedness/responsiveness have been inadequately addressed – they may even have been purposefully overlooked, given their economic and political cost. Behind superficial policy reforms in the wake of crises soon forgotten, these structural, organizational and behavioural factors, though seemingly minor or trivial, remain impediments to guaranteeing the welfare of the most vulnerable citizens and persist as a threat to freedom and security across the EU.

Les vieux ne bougent plus, leurs gestes ont trop de rides, leur monde est trop petit Du lit à la fenêtre, puis du lit au fauteuil et puis du lit au lit Et s'ils sortent encore bras dessus, bras dessous, tout habillés de raide C'est pour suivre au soleil l'enterrement d'un plus vieux, l'enterrement d'une plus laide

Jacques Brel (Les Vieux)

References

Ambler, J. (1975). 'Trust in political and nonpolitical authorities in France', Comparative *Politics*, 8 (1), pp. 31-58.

Beck, U. (1992). Risk Society: Towards a New Modernity, Sage: London

Berkman, L. F., Melchior, M., Chastang, J-F, Niedhammer, I., Leclerc, A. & Golberg, M. (2003). 'Social integration and mortality: a prospective study of French employees of electricity of France-Gas of France, *American Journal of Epidemiology*, 159 (2), pp.167-174.

Besancenot, J-P. (2002). Vagues de chaleur et mortalité dans les grandes agglomerations urbaines. Environnement, *Risques & Santé*, 1, pp. 229-240.



- Black, E., Blackburn, M., Harrison, G. & Methven, J. (2004). 'Factors contributing to the summer 2003 European heat wave', *Weather*, 59, pp. 217-233.
- Boin, A., 't Hart, P., Stern, E. & Sundelius, B. (2007). *The Politics of Crisis Management Public Leadership under Pressure*, Cambridge: C.U.P.
- Bourdieu, P. (1972; 1977). Outline of a Theory of Practice, Cambridge: C.U.P.
- Busby, J. (2005). 'Who Cares about the weather? Climate Change and U.S. National Security', conference paper, Oslo 21-23 June 2005.
- Catterberg, G. & Moreno, A. (2005). 'The individual bases of political trust: trends in new and established democracies', *International Journal of Public Opinion Research*, 18 (1).
- Cheung, S. L. K., Robine, J. M., van Oyen, H., Griffiths, C. & Herrmann, F. (2007). *The 2003 Heat wave in Europe a review of the literature*. Montpellier, The 2003 Heat Wave Project (EU Community Action Programme for Public Health, Grant Agreement 2005114).
- Colvez, A., Robine, J-M. & Michel, E. (1984). 'Professional housekeeping aide for elderly persons needs, demand and beneficiaries', <u>Revue d'épidémiologie et de santé publique</u>, 32 (1), p. 309.
- Crabbe, C. (2003). 'France caught cold by heatwave', *Bulletin of the World Health Organization*, 81 (10).
- Craig, G. (2004). 'Citizenship, Exclusion and Older People', *Journal of Social Policy*, 33 (1), pp. 95-114.
- Davido, A., Patzak, A., Dart, T., Sadier, M. P., Méraud, P., Masmoudi, R., Sembach, N. & Cao, T. H. (2006). 'Risk factors for heat related death during the August 2003 heat wave in Paris, France, in patients evaluated at the emergency department of the Hôpital Européen Georges Pompidou', *Emergency Medicine Journal*, 23, pp. 515-518.
- DSS (1998). New Ambitions for Our Country: A New Contract for Welfare, Green Paper, Cm 3805. London: HMSO.
- Esping-Andersen, G. (1990). The Three Worlds of Welfare Capitalism, Cambridge: Polity.
- Ferrera, M. (2005). The Boundaries of Welfare European Integration and the New Spatial Politics of Social Protection, Oxford: O.U.P.
- Fleck, F. (2003). 'France caught cold by heatwave', *Bulletin of the World Health Organization* 81 (10), pp. 773-775.
- France Diplomatie (2007). 'Solidarity', available at:
 http://www.diplomatie.gouv.fr/en/france 159/french-society 6816/way-of-life 5279/general-points 1987/solidarity 1457.html, last accessed 13 August 2009.
- Franklin, C. M. (2004). 'Lessons from a heat wave', Intensive Care Med, 30 (167).
- Fuhrer, R., Dufouil, C., Antonucci, T. C., Shipley, M. J., Helmer, C. & Dartigues, J. F. (1999). 'Psychological disorder and mortality in French older adults: do social relations modify the association?', *American Journal of Epidemiology*, 149 (2), pp. 116-126.
- Giddens, A. (2007). European in a Global Age, Polity: Cambridge.
- Grynszpan, D. (2003). 'Lessons from the French heatwave', commentary, *The Lancet*, 362, pp. 1169-1170.
- Hantrais, L. (2007). Social Policy in the European Union, Basingstoke: Palgrave.
- Hémon, D. & Jougla, E. (2004). 'The heatwave in France in August 2003', *Rev Epidemiol Santé Publique* 52 (1), pp. 3-5.
- Hémon, D. & Jougla, E. (2003). Surmortalité liée à la canicule d'août 2003, INSERM, Paris.
- Imbert, F., Lang, P. O., Meter, N. Heitz, D. Berthel, M. & Kuntzmann, F. (2005). 'Home living conditions in Alscae of the disabled elderly aged 75 years and more', *Revue d'épidémiologie et de santé publique*, 53 (2), pp. 153-165.
- Institut de Veille Sanitaire (2003). 'Impacte sanitaire de la vague de chaleur en France survenue en août 2003', 29 August 2003.
- Izuhara, M. (2004). 'Negotiating Family Support? The 'Generational Contract' between long-term care and inheritance', *Journal of Social Policy*, 33 (4), pp. 649-665.
- Journal Officiel (2005). no. 26 of 1 February, containing text no. 7, Arrêté du 11 janvier 2005 relatif à la reconnaissance de l'état de catastrophe naturelle, p.1651.

- Klinenberg, E. (2002). Heat Wave A Social Autopsy of Disaster in Chicago, Chicago: The University of Chicago Press.
- Kuhn, R. (2005). 'The Raffarin Premiership: A Case of Failed Political Leadership', South European Society and Politics, 10 (2), pp. 2445-261.
- Lagadec, P. (2004). 'Understanding the French 2003 Heat Wave Experience: Beyond the heat, a Multi-Layered Challenge', Journal of Contingencies and Crisis Management, 12 (4), pp. 160-169.
- Langer, N. (2004). 'Natural disasters that reveal cracks in our social foundation', Educational Gerontology, 30, pp. 275-285.
- Natali, D. & Rhodes, M. (2004). 'Trade-offs and Veto Players: Reforming Pensions in France and Italy, French Politics 2 (1), pp. 1-24.
- Ogg, J. (2005). HEATWAVE: implications of the 2003 French heat wave for the social care of older people, Young Foundation Working Paper No. 2, October 2005.
- Palier, B. (2003). 'Reformer les Retraites en France', in French Politics, Culture and Society, 21 (3), pp. 51-72.
- Pestieau, P. (2006). The Welfare State in the European Union Economic and Social Persecptives, Oxford: O.U.P.
- Pidgeon, N., Kasperson, R. E. & Slovic, P. (2003). The Social Amplification of Risk, Cambridge: C.U.P.
- Porter, T., (1995). Trust in Numbers. The Pursuit of Objectivity in Science and Public Life, Princeton: P.U.P.
- Poumadère, M., Mays, C., Le Mer, S. & Blong, R. (2005). 'The 2003 Heat Wave in France: Dangerous Climate Change Here and Now', Risk Analysis 25 (6), pp. 1483-1494.
- Putnam, R. (2000). Bowling Alone: The Collapse and Revival of American Community, New York: Simon & Schuster.
- Robine, J. M., Cheung, S.L., Le Roy, S., van Oyen, H. & Herrmann, F. R. (2007). 2003 Heat Wave Project - Report on excess mortality in Europe during summer 2003 (EU Community Action Programme for Public Health, Grant Agreement 2005114).
- Rodger, J. J. (2003). 'Social Solidarity, Welfare and Post-Emotionalism', Journal of Social Policy, 32 (3), pp. 403-421.
- Schludi, M. (2003). 'Politics of Pension Reform The French Case in a Comparative Perspective', French Politics 1 (2), pp. 199-224.
- Slovic, P. (2000). *The Perception of Risk*, Earthscan: London.
- Slovic, P., Flynn, J., Mertz, C. Poumadère, M. & Mays, C. (2000). 'Nuclear power and the public: A comparative study of risk perception in France and the United States', in O. Renn, O. & Bohrmann, B. (eds.), Cross-cultural Risk Perception: A Survey of Empirical Studies, Amsterdam: Kluwer Academic Press.
- Shrivastava, P. (1992). Bhopal: Anatomy of a Crisis, second edition, London: Chapman.
- Stein, M. (2004). 'The critical period of disasters: Insights from sense-making and psychoanalytic theory', Human Relations, 57 (10), pp. 1243-1261.
- Thirion, X., Debensason, D., Delarozière, J-C. & San Marco, J L (2005). 'August 2003: Relfections on a French Summer Disaster – Why were its medical consequences so serious? Are we sure to do better next time?', Journal of Contingencies and Crisis Management 13 (4), pp. 153-158.
- Vandentorren, S., Florence, S., Medina, S., Pascal, M., Maulpoix, A., Cohen, J-C. & Ledrans, M. (2004). 'Mortality in 13 French Cities During the August 2003 Heat Wave', Research and Practice 94 (9), pp. 1518-1520.
- Vandentorren, S., Bretin, P., Zeghnoun, A., Mandereau-Bruno, L., Crosier, A., Cochet, C., Ribéron, J., Siberan, I, Declercq, B. & Ledrans, M. (2006). 'August 2003 Heat Wave in France: risk factors for death of elderly people living at home', European Journal of Public Health, O.U.P.
- Vanhems, P., Gambotti, L. & Fabry, J. (2003). 'Excess Rate of In-Hospital Death in Lyons, France, during the August 2003 Heat Wave', The New England Journal of Medicine 349 (21), pp. 2077-2078.



- Vassallo, F. (2004). 'Political Activism and Association Involvement: The French Choice in Comparative Perspective', *French Politics* 2 (3), pp. 298-332.
- Vescovi, L., Rebetez, M. & Rong, F. (2005). 'Assessing public health risk due to extremely high temperature events: climate and social parameters', *Climate Research*, 30, pp. 7178.
- Wright A.J., Young, A.N. & Natarajan, S. (2005). 'Dwelling temperatures and comfort during the August 2003 heat wave', *Building Serv. End. Res. Technol.* 26 (4), pp. 285-300.
- Ysmal, C. (2004). 'France', European Journal of Political Research, 43, pp. 1006-1009.

Most of the cartoons can be viewed freely at http://www.leplacide.com. Placide is an excellent diary of French political life through comic illustration with a keyword search.
